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## LIGHT ON THE AENEID

In a volume entitled Excavations at Carthage 1925 (New York, The Macmillan Company, 1926. Pp. x + 51), Professor Francis W. Kelsey gives A Preliminary Report setting forth "the more important results of the work of the Franco-American Staff at Carthage in 1925..." On pages 43–49 he discusses the cinerary urns. Some things found in these urns lead Professor Kelsey to discuss (47–49) anew the question of human sacrifices at Carthage. Among other things he says (48–49):

... One writer, M. P. Pallary[1]... finds in the precinct of <the goddess> Tanit <at Carthage>...full confirmation of this horrible practice among the Carthaginians....Furthermore, he interprets as a survival from an early Semitic ritual of sacrifice a custom still in vogue among the Jews in North Africa. When the first male child is born in a Jewish home, he says, a member of the Cohen family, which formerly conducted the sacrifices, presents himself at the home of the parent and demands the babe as belonging to him. The mother acknowledges the absolute right of the Cohen, and offers to ransom the child: the ransom is arranged by means of gifts.

This passage must at once lead us to recall Vergil's statement that certain rites were regularly entrusted to certain families. Compare Aeneid 8.268–270:

> Ex illo celebratus honos, laetique minores
> servavere diem, primusque Potitius auctor
> et domus Herculei custos Pinaria sacri.

Livy (1.7.12) refers to the same thing: adhibitis ad ministerium dapemque Potitiis ac Pinariis, quae tum familiae maxime inclitae ea loca incolebant. Compare also 9.29.9 Potitia gens, cuius ad Aram Maximam Herculis familiare sacerdotium fuerat.

In Professor Kelsey's Report, page 48, note 2, we read:

... in November, 1925, American newspapers published the following despatch, sent out by the Associated Press:

"Pueblo, Colorado, Nov. 8. The love of a Ute Indian for his bride, which caused him to bury his 17-day old baby alive in the grave of its mother, believing it would bring her back to life, will bring Platt Nae face to face with the white man's law here to-morrow in a federal court trial for murder.

"Nae, who has been held in jail here since last February, will invoke the law of the medicine man for his defense. He contends that he buried the child on the advice of his father-in-law, Mormon Joe, medicine man of the Utes, who is also held as an accessory".

I had myself clipped and preserved two newspaper accounts referring to the same incident, but in a manner more distinctly suggestive of Vergil. One from The New York Sun, April 2, 1925, said, in part, as follows:

The Government charges that Pate Nay <*sic*>, ... whose squaw recently died, wrapped the body in a blanket with the child and buried them, on "coercion of Mormon Joe". The bodies were exhumed on the reservation last week. The verdict of a Coroner's jury was that the infant was buried alive and that its mother died of natural causes.

Another from the same paper, November 17, 1925, said:

Testimony showed that he wrapped the live baby in the burial blanket with its dead mother, permitted them to lie on the Ute camp ground throughout a February night and buried them the next day in a shallow grave—all under the orders of Mormon Joe, medicine man and father-in-law of May <*sic*> .... The testimony showed that May feared Mormon Joe, and obeyed his command because disobedience might have meant death, and that he also was an unwilling servant of the medicine man when he bound the bodies of his dead bride and his live son together and prepared them for burial.

Of course this cannot fail to suggest Aeneid 8.485–488:

> mortua quin etiam iungebat corpora vivis,
> componens manibusque manus atque oribus ora,
> tormenti genus, et sanie taboque fluentis
> complexu in misero longa sic morte necabat.

Of this Nettleship, in his revision of Conington's edition (1883), says: "This trait seems to have been borrowed by Virg. from the historical barbarities of the Etruscan pirates". But I have been led to wonder whether the custom may have a more primitive origin than that, in some savage practice prevalent among races as divergent as Etruscans and North American Indians. A search through The Golden Bough has revealed no reference to anything of the sort; but perchance some authority on the subject of magic and superstition can offer enlightenment in the matter.

HUNTER COLLEGE E. ADELAIDE HAHN

[1] In Revue Tunisienne, 1922, 206–211.

## THE CLASSICAL ASTRAL WEATHER CHART FOR RUSTICS AND FOR SEAMEN[1]

> Quid faciat laetas segetes, quo sidere terram
> vertere, Maecenas, ulmisque adiungere vites
> conveniat .....
> hinc canere incipiam.

Thus, at the beginning of his Georgics (1.1–5), Vergil

[1] Other studies of weather lore by the author to be found in THE CLASSICAL WEEKLY are An Animal Weather Bureau, 14.89–93, 97–100; The Folk Calendar of Times and Seasons, 16.3–7; The Plant Almanac and Weather Bureau, 17.105–108; Magic and the Weather in Classical Antiquity, 18.154–157, 163–166.

References to several works are so frequent in these Notes that each work will be cited by the name of the author only, thus: Aratus ( = Aratus, Phaenomena); Columella ( = Columella, De Re Rustica); Hesiod ( = Hesiod, Works and Days); Pliny ( = Pliny, Naturalis Historia); Theophrastus ( = Theophrastus, De Signis); Varro ( = Varro, Res Rusticae).

I wish to express indebtedness to Guilelmus Gundel, De Stellarum Appellatione et Religione, in Religionsgeschichtliche Versuche und Vorarbeiten, 3 (1906), 93–225.

proclaims that it is part of his purpose to tell under what star one should turn the earth and train the vines to the elms. Farther on in the same poem[2] he says of the constellations:

'From them we can predict the weather, though the sky be doubtful, from them the day of harvest and the time to sow, and when one may ply the treacherous smooth sea with his oars and launch the well-armed fleet, or overthrow in season the pine in the forest. It is not in vain that we observe the rising and the setting of stars[3] and the year equally divided into its four different seasons'.

Vergil, doubtless seeing how much more readily the sailor read the heavens than did the peasant[4], concluded that this condition had prevailed ever since man made his first dugout[5], but, as Servius says[6], Non omnia prudenter a poeta dicenda sunt.

The Romans applied to almost all the stars Greek names or Latin translations of Greek names. Since the pastoral and agricultural stages of civilization long preceded any extensive commerce on the Mediterranean or other seas[7], it is hardly believable that the Greeks, living in a country the climate of which permitted them to watch their flocks by night during a great part of the year, would leave the naming of the stars to sailors. As was pointed out by Dr. Walter Leaf[8], the names of stars mentioned by Homer are in general taken from the lives of huntsmen and shepherds. The later catalogue of names reflects likewise the activities of husbandmen and even of fishermen who were not necessarily seamen. Varro[9] realized how they smacked of the soil, but he thought they had been given by astronomers. Vitruvius[10] evidently regards the vast body of astral weather predictions as the result of scientific astronomical investigations of the rising and the setting of the stars. Through all ages sailors have been especially weather-wise, and of necessity, but they merely added to the traditional lore of landlubbers such knowledge as their new experiences enabled (or forced) them to acquire.

No picture of the everyday life of the rustic of antiquity can be complete if it does not take into account his familiarity with the heavens. We ourselves get our weather knowledge from the morning paper; the rustic got his most dependable forecasts at first hand from the skies. He knew something of the ways and the habits of the stars, and to this extent was an astronomer. The comparatively small amount of astral weather lore to-day is due, I believe, to ignorance of the constellations more than to greater diffusion of knowledge. Our unfamiliarity with the heavens is doubtless to be ascribed in large measure to the greater prevalence of indoor life.

The oldest considerable body of homely weather maxims of the Greeks is to be found in Hesiod's Works and Days. I doubt not that it was stock information that was hoary with age long before Hesiod was born, and that his great contribution was to sift from a far larger body of sayings those that he thought most trustworthy for Boeotia[11]. It is hard to imagine a time so far back that there were no local weather savants[12]. According to some of the rationalizing ancients[13], Aeolus was such, and his services to Ulysses consisted not in giving him a sack of winds, but in telling him what winds blew when the various constellations were rising.

Sophocles[14], noting how common and indispensable such knowledge was, makes Prometheus the originator of it, as of so many other blessings to mankind. He represents this great benefactor as saying of the men of old:

'They did not have any dependable information of winter or of the flowering spring or of the productive summer, but did everything entirely without knowledge until I showed them the risings of the stars and their settings, difficult to determine'.

Though Prometheus may have been the first to read for men the calendar in the sky, to the providence of Zeus must be attributed its existence:

He tells what time the soil is best for the labour of the ox and for the mattock, and what time the seasons are favourable both for the planting of trees and for casting all manner of seeds. For himself it was who set the signs in heaven, and marked out the constellations, and for the year devised what stars chiefly should give to men right signs of the seasons[15], to the end that all things might grow unfailingly. Wherefore him do men ever worship first and last[16].

The signs of the zodiac, which Zeus has set on every side, mark the year, the time to plow and to sow the fallow field, and the season to plant the tree[17]. In Xenophon's Oeconomicus[18] it is stated, in a matter-of-fact way, that, as autumn comes, all men look to god for the time when he will rain and thus permit them to sow the earth.

It would seem, therefore, that the exhortation of Aratus[19] to heed the sun, moon, and stars was somewhat superfluous. An indication of the Greek interest in the contents of Aratus's work is given by the fact that we have the names of twenty-seven Greeks who composed commentaries upon it[20].

[2] 1.252–258.

[3] Plato would have assented to this. See Galen, De Historia Philosophica 2. 13 (Kühn's edition, 19.274).

[4] Georgics 1.204–207: compare 1.50–51. Pliny 18.206 quotes Vergil with approval. See also Aetna 243–244.

[5] Georgics 1.136–138. [6] On Georgics 1.366.

[7] Cicero, De Divinatione 1.2, says that the 'Assyrians' (i. e. Babylonians) were naturally led to observation of the stars because of the flatness of the country in which they lived.

[8] In a note on Iliad 18.486. [9] 2.1.7–8. [10] 9.6.3.

[11] I believe that Hesiod was to no small degree a redactor of agricultural knowledge. Genius though he was, I think him less of an innovator than did Pliny (18.201).

[12] Theophrastus says (3) that it is always possible to find such an observer. A Scholium on Aratus 765 asserts that a skilful forecaster could read the signs for three and five days in advance.

[13] Palaephatus, Chapter 17 (page 25 in the Teubner edition of Mythographi Graeci, Volume 3, Fasciculus 2). For another account of the source of his wisdom see THE CLASSICAL WEEKLY 18.156 (top of first column).

[14] Prometheus 454–458. Compare Varro, De Lingua Latina 7.73: Arbitror antiquos rusticos primum notasse quaedam in caelo signa quae praeter alia erant insignia atque ad aliquem usum culturae et tempus designandum convenire animadvertebantur. A rationalized version of the myth of Atlas says that he was the first to realize the possibilities of weather prediction by the study of astronomy. See Heraclitus, De Incredibilibus, Chapter 4 (page 74 in the Teubner edition of Mythographi Graeci, Volume 3, Fasciculus 2).

For other traditions in the Argolic peninsula see Sophocles, Fragment 309 (in Nauck's Tragicorum Graecorum Fragmenta[2]), and Theon Ad Arati Phaenomena 27.

[15] See also Aratus 451–452; Columella 1, Praefatio 23; Eustathius, Migne, Patrologia Graeca 18.720.

[16] Aratus 7–14 (G. R. Mair's translation). Compare Philo, De Mundi Opificio 18–19, and Diodorus 1.81.4–6.

[17] Aratus 741–743. Compare Pliny 18.201.

[18] 17.2. Compare Pliny 18.224. [19] 752–777.

[20] See J. Boehme, Das Sogenannte Aratkommentatoren-Verzeichniss im Vatikan, Rheinisches Museum 42 (1887), 307–309. The commentary of Hipparchus Bithynius has survived. See Carolus Manitius, Hipparchi in Arati et Eudoxi Phaenomena Commentariorum Libri Tres (Teubner edition, Leipzig, 1894).

The knowledge that we take more or less for granted among the Greeks was not quite so common among the Romans. Pliny [21] bemoans the fact that there were peasants who were ignorant of stars as well as of letters. He is not entirely consistent with himself, however, for, in the same book[22], with the ardor of a propagandist he urges his countrymen to learn the signs of times and seasons as conveyed by plants, 'the Vergiliae of the earth', in the same way that they know those of the heavens.

I believe, therefore, that, while the weather knowledge which the Romans derived from the heavens might not compare well with that of the Greeks, it still implies an enviable familiarity with the constellations. I say this in spite of the fact that Vergil and Ovid make mistakes in their astronomy. Even Columella, who did not have to pay heed to literary tradition, made glaring errors.

Though the ancients did not possess the equipment for a really scientific study of meteorology, they were fully alive to the advantages and the necessity of regulating their conduct by weather prognostications. The following conclusion of a discussion of celestial weather signs[23] is illuminating:

'Who does not know, therefore, how much profit man derives from observing them? Foreseeing dangers, those bent on putting to sea can keep their ship in port[24]; the wayfarer likewise, warned by overcast skies, awaits clear weather; husbandmen too, warned by signs they have learned, check their zeal in the interests of their seeds and plants, and stop work till a suitable season'.

Weather knowledge was also a matter of official concern in antiquity. It is greatly to the credit of the ancients that, however much they erred, they put their greatest trust in celestial signs. Men in authority finally realized that, if there was any solution to their weather problems, it lay in the heavens. This realization was in itself an important step in the right direction.

In lieu of almanacs and newspapers they engraved, upon brass or stone, tables of the rising and the setting of the important stars and the various kinds of weather that might be expected to accompany these movements[25]. These were nailed or hung up in places where people congregated, such as market-places, and hence were called *Parapegmata*, 'Affixtures'[26]. They might almost be called 'billboard' calendars.

Interesting and important fragments of such star-calendars have been found in Miletus[27]. An excellent idea of their character can be gained likewise from the literary fragments of the *Parapegma* of Democritus[28].

We are fortunate in possessing star-catalogues containing material similar to that in the *Parapegmata*. Most representative, perhaps, are those drawn up by Geminus[29], whose floruit was about 80 B. C., and by the famous Ptolemy[30] (about 140 A. D.). The most detailed is to be found in Lydus, De Ostentis 59–71. A very brief catalogue occurs in the Geoponica, 1.9.

The calendar of Columella (11.2) gives a great deal of (mis)information about the weather, but goes into greater detail with regard to farming operations. The same may be said of the similar material in Pliny, 18.201–320. Varro (1.29–36) is more general and condensed. These Latin references remind one of a Kalendarium Rusticum, or The Husbandman's Monethly Directions, which was published in England in 1669[31].

The Phaenomena of Aratus, which made a great impression upon Romans as well as upon Greeks, was translated by Varro Atacinus, Cicero[32], Germanicus Caesar[33], and Avienus[34]. The Prognosticorum Reliquiae[35] of Germanicus Caesar is devoted almost exclusively to the second type of information contained in the Parapegmata, i. e. to the signs of the kind of weather indicated or caused by the stars.

For the sake of brevity I am refraining almost entirely from quoting sources which contain in small compass much material pertinent to this paper, and therefore refer the inquisitive reader to the fragments from Miletus, the passages mentioned in Geminus, Ptolemy, and Lydus, the Prognosticorum Reliquiae of Germanicus Caesar, and the Latin translations of Aratus. By great good fortune, however, the weather lore that I am omitting, so far as it is associated with definite days, has been collected and arranged in a composite calendar in Daremberg et Saglio, Dictionnaire des Antiquités Grecques et Romaines (s. v. Calendarium, Volume I, Part 2, 838–849).

### STARS AS CHRONICLERS OF SEASONS

"All these constellations", says Aratus[36], "thou canst mark as the seasons pass, each returning at its appointed time; for all are unchangingly and firmly fixed in the heavens to be the ornaments of the passing night". They are the means of differentiating months[37] as well as seed-times and harvest-seasons[38]. Certain stars marked the *articuli anni*, 'the joints of the year'[39], which were sometimes called the *cardines temporum*, 'the hinges of the seasons', the times of transition from

[21] 18.305. [22] 251–253.

[23] Eustathii Hexaemeri Metaphrasis 6.4 (Migne, Patrologia Latina 53.925). Compare Columella 11.1.32; Scholia on Aratus 743, 756, 758.

[24] See also Aratus 758–764; Vergil, Georgics 1. 454–463.

[25] Scholium on Aratus 752; Aelian, Varia Historia 10.7; Diodorus 12.36.2.

[26] Compare French *affiches*.

[27] They are described by H. Diels and A. Rehm, Parapegmenfragmente aus Milet, Sitzungsberichte der Königlich Preussischen Akademie der Wissenschaften, 1904, Part I, 92–111. When a new fragment was found, this article was supplemented by A. Rehm, Weiteres zu den Milesischen Parapegmen, *ibid.*, 752–759.

[28] They are collected by H. Diels, Die Fragmente der Vorsokratiker, 1.390–393 (Berlin, 1906).

[29] Carolus Manitius, Gemini Elementa Astronomiae, 210–233 (Teubner edition, Leipzig, 1898).

[30] J. L. Heiberg, Claudii Ptolemaei Opera Quae Extant Omnia, 2.1–67 (Teubner edition, Leipzig, 1907).

[31] This can be found in the Addenda to A. W. Mair's translation of Hesiod, The Poems and Fragments, 114–125 (Oxford, 1908).

[32] The translation, so far as it survives, is to be found in Poetae Latini Minores (edition of Baehrens), 1.1–27. See A. S. Pease's note on Cicero, De Divinatione 1.13 (pages 78–79 of the work cited in Note 67).

[33] The translation and his Prognosticorum Reliquiae are to be found in Alfredus Breysig, Germanici Caesaris Aratea Cum Scholiis (Teubner edition, Berlin, 1867).

[34] See the edition of Alfredus Breysig, Rufi Festi Avieni Aratea (Teubner edition, Leipzig, 1882).

[35] See Note 33.

[36] 451–453 (G. R. Mair's translation). See too the Scholium on Aratus 10.

[37] Commenting on Vergil, Georgics 1.335, caeli menses et sidera serva, Servius says: id est duodecim signa, quibus menses agnoscimus.

[38] Eustathius, Migne, Patrologia Graeca 18.720.

[39] Manilius 2.657. Compare the uses of *articuli temporum* in Pliny 18.222, 351.

one season to another[40]. Pliny[41] states that Aries indicates the spring equinox, Cancer the summer solstice, Libra the autumnal equinox, Capricorn the winter solstice. Varro[42] represents spring as beginning when the sun is in Aquarius, summer when it is in Taurus, fall when it is in Leo, and winter when it is in Scorpio.

The rising and the setting of the Pleiades served to divide the year into two parts[43], and were in fact signs of the advent of summer and of winter[44]. As we shall see, Arcturus made an equally satisfactory division. Even the hour of the night might be learned from the position of Orion in the sky[45].

### GENERAL SIGNS

When the entire sky is equally bright at the *articuli temporum*[46], the autumn will be clear and cold; if spring and summer have passed not without some cold, they will make the autumn clear and settled and less windy; a clear autumn will make a windy winter[47].

The rising and the setting of stars together with the disturbances attending these movements cause now cold, now rain, now other kinds of injury to the earth[48]. Often before the advent of rain a darkening halo appears about a star[49]. After bad weather the stars are brilliant and their outline clear[50].

But when the clear light from the stars is dimmed, though no thronging clouds veil, nor other darkness hide nor Moon obscure, but the stars on a sudden thus causelessly wax wan, hold that no more for sign of calm but look for storm[51].

The flashing[52] of stars means winds from definite directions; but, if they flash in different places, they announce uncertain winds and from all directions. It was a commonplace to remark on the return of clear weather that the influence of such and such a constellation had terminated[53].

### SHOOTING STARS AND COMETS

The appearance of many shooting stars (meteoric showers) is a sign of wind or rain, which will come from the same quarter from which the stars appeared[54]. When such stars appear on all sides, there will be winds from every quarter[55]. Lydus is very explicit, stating that shooting stars from one direction mean wind from that quarter; from opposite directions, confusion of winds; from four quarters, all sorts of storms till thunder and lightning occur[56]. The star which leaves a whitening trail or furrow behind is often mentioned, being a sign much observed by sailors[57].

From such a star arise squalls, and, if there is any air in a cloud it encounters, thunder occurs; if it breaks its way out in flames, there are thunderbolts; if it struggles on in a rather long course, there is lightning[58]. If a circle (halo) encloses any of the planets, rain is indicated[59].

There is also considerable weather lore about comets, the 'long-haired' stars of the ancients. When they are frequent, they foreshadow wind and drought, according to Aristotle[60]. At the time of the comet of 373–372 B. C. the winter was dry, and north winds prevailed[61]. Again, Aristotle associates a storm at Corinth with a comet that had appeared about the equinoctial circle for a few days in the archonship of Nicomachus (341–340 B. C.)[62].

Seneca[63] feels impelled to warn his friend Lucilius that

> the rising of a comet does not convey a threat of wind and rain in the immediate future, as Aristotle says, but casts suspicion over the whole year. Hence it is plain that the comet has not derived prognostications from its immediate surroundings to reveal for the immediate future, but that it has them stored up and buried deep within by the laws of the universe. The comet which appeared in the consulship of Paterculus and Vopiscus fulfilled the anticipations of this kind entertained by Aristotle, and for that matter by Theophrastus; for there were everywhere severe and prolonged storms, while in Achaia and Macedonia cities were overturned by earthquakes.

If the type of comet called *hippeus* looks toward the North, there will be a pestilential drought; but if it looks toward Bootes, there will be bitter cold as far as the Euxine Sea[64], and unusual storms will occur[65]. When the kind called *lampadias* looks toward the East, it signifies a cloudy atmosphere[66].

When during violent storms stars (St. Elmo's fire) seemed to settle on the sails, sailors thought that they were being aided by Castor and Pollux. This was a sign that the storm was breaking and the wind abating, for otherwise the fires would flit about without falling[67].

### PLANETS

Astrology taught that the period of the conjunction of heavenly bodies was attended by rain if it started in a section of the heavens corresponding to the moister

[40] Pliny 18.222.

[41] 18.221. Compare Manilius 2.265–269, 656–659. Elsewhere the setting of Lyra is made the beginning of autumn (Varro ap. Plinium 18.296: compare 289). Pliny 18.221 is about the same as the Scholium on Aratus 462. See too the Scholia on Aratus 231, 233, and Geoponica 1.12.1.

[42] Apud Geoponica 1.1.2–5.

[43] Theophrastus 6; Pliny 18.280; Scholia on Aratus 264, 266.

[44] Aratus 266–267; Scholium on Apollonius, Argonautica 3. 225; Pliny 2.123, 125; Isidore 3.71.13; Hyginus, Astronomicon 2.21.

[45] Scholium on Aratus 730.

[46] I. e. the two equinoxes and the two solstices. I do not see how any of them except the autumnal equinox could be even popularly associated with the weather of autumn.

[47] Pliny 18.351. See also Theophrastus 44, 48, 56.

[48] Seneca, Naturales Quaestiones 2.11.2.

[49] Aratus 938–941; Pliny 18.353. [50] Vergil, Georgics 1.393–395.

[51] Aratus 1013–1018 (Mair's translation). Compare 1091, and Pliny 18.352.

[52] In the source for this sentence, Pliny 18.352, the text as restored in the 1892 Teubner edition reads *si coruscabunt*. As far as the sense is concerned, it seems to me that the reading of *G*, *cursitabunt*, fits better. I suspect that *si cursitabunt* is a translation of some such word as **διαδρομαί**, or **διεκδρομαί**, and that shooting stars are meant. In 2.100 Pliny uses the expression *discursus stellarum*.

[53] Pliny 18.208.

[54] Theophrastus 13, 37; Aratus 926–929; Pliny 2.100, 18.351; Seneca, Naturales Quaestiones 1.1.11, 1.14.6; Lydus, De Ostentis 20, ad finem. See also Geoponica 1.11.9.

[55] Theophrastus 37; Aratus 929–932.

[56] De Ostentis 9 D, page 27 of Wachsmuth's edition (Leipzig, Teubner, 1897).

[57] Aratus 927, and Scholium; Vergil, Georgics 1.365–367; Lucan, Pharsalia 5.561–564; Seneca, Phaedra 747–748; Pliny 18.352. See also Iliad 4.76–77; Theocritus 13.49–52.

[58] Pliny 2.112. [59] Pliny 18.352.

[60] Meteorologica 1.7, 344 b. See too Theophrastus 34; Aratus 1091–1093; Seneca, Naturales Quaestiones 7.28.1.

[61] Meteorologica 1.7, 344 b. [62] 345 a.

[63] Seneca, Naturales Quaestiones 7.28.2 (Clarke's translation).

[64] Evidently from the standpoint of Lydia.

[65] Lydus, De Ostentis 12. See also Theophrastus 57.

[66] Lydus, De Ostentis 14.

[67] Seneca, Naturales Quaestiones 1.1.11. See also Pliny 2.101. For the bibliography of St. Elmo's fire see A. S. Pease, M. Tulli Ciceronis De Divinatione (University of Illinois Studies in Language and Literature), pages 224, 315–316, 475–476, 597, and note especially Jaisle, Die Dioskuren als Retter zur See (Tübingen, 1907).

portions of the earth, but that a conjunction over a place that was hot and dry might be expected to bring heat and dryness[68]. With the assurance of one of our own almanacs the Geoponica[69] gives a great many interesting weather prognostics derived from the position of the planet Jupiter as it travels through the signs of the zodiac in a twelve-year cycle (*dodekaeteris*). It is stated, for instance, that, when Jupiter presses upon Aries in the house of Mars, Boreas will prevail for the entire year, not, however, to the exclusion of Eurus[70]. Under such conditions the winter will be cold and snowy; there will be continual rains and flooded streams.

An elaborate list of the weather indications when each of the planets Saturn, Jupiter, Mars, Venus, and Mercury is dominant in any of the twelve signs of the zodiac is given in Catalogus Codicum Astrologorum Graecorum (4. 83–87). In the same work (7. 183–187) there is an equally impressive schedule of the weather to be expected when the moon is in any of the twelve signs during either June or July[71]. The weather signs of the sun and the moon are too extensive to be discussed here.

The planet Saturn is described by Vergil, Georgics 1.336, as *frigida Saturni stella*. There is considerable general weather lore connected with its Greek counterpart Kronos (and also with the god of the same name)[72], but in Latin the emphasis is on chilly and wintry aspects[73]. In commenting on the Vergilian line Servius says: Ideo hoc dicit quia Saturnus deus pluviarum est, unde etiam senex fingitur: nam senes semper novimus esse gelidos. I fail to see that the *unde*-clause is a logical consequence of the preceding words. To me it is a *non-sequitur*. Servius (on Georgics 3.104) knows of the confusion of *Kronos* and *chronos*, 'time', and he calls Saturn *deus. . . aeternitatis et saeculorum*. He may have known also of the Greek proverb, 'Older than Kronos', to signify a person exceedingly old. It seems clear that the association of Kronos with old age is due simply to the great antiquity of the god and to the confusion of his name with the Greek word for time. I have not been able to find record of any piece of sculpture or of any vase-painting which represents Saturn as a rain-god in the guise of an old man. The word *etiam* in the *unde*-clause indicates that Servius himself thought the circumstance somewhat strange. I am wondering whether Servius looked upon the representation of the aged rain-god, or rather the rain-spirit, upon the Antonine Column as that of Saturn. It is pretty certain that at the time the Column was erected the figure was not regarded as that of Jupiter or of the Christian deity, or in fact of any special god[74].

In the remainder of this paper I shall record typical beliefs about the weather and agricultural associations of certain stars. The material is so diverse and miscellaneous that I am unable, in brief compass, to do much more than catalogue it.

### PLEIADES ( = VERGILIAE)

Since with the heliacal rising of the Pleiades in May the sea became less subject to storm and travel by ship was regarded as safe, the Greeks associated the name Pleiades with the verb meaning 'to sail' (*plein*), and popularly regarded these stars as 'The Sailors'[75]. There is one ancient myth which says that the Pleiades are the star transformations of the *peleiades*, the pigeons that nourished Zeus[76], and legends of wild pigeons show numerous traces of the mythical astronomy of the Pleiades[77]. It is noteworthy that the *peleiades* were likewise regarded as harbingers of summer and winter[78].

Leaf[79] thinks it possible that the stars are a "flight of doves fleeing, like the Bear, from before the hunter Orion". The Romans derived the word *Vergiliae* from *ver*, 'spring', because the Vergiliae rose in the spring[80].

Since this constellation appeared and disappeared at seasons that favored certain kinds of work and stopped others, it regulated many kinds of activities. Its rising reawakened human energy. As already indicated, then began the open season for sailing[81]. Vegetius[82] says that from that time till the rising of Arcturus sailing was supposed to be safe because the severity of the winds was mitigated by the tempering influence of summer.

The rising of the Pleiades was the signal that the first of the three seed-times had arrived[83], and that grain which had been sown the preceding fall should be harvested[84]. At this time special attention was given to fig-trees in order that they might hold their fruit[85]. The period was so significant that both Democritus among the Greeks and Sextius among the Romans predicted 'futures' in olive oil[86]. Since this was the

[68]Hermippus, De Astrologia Dialogus 2.9.

[69]1.12. Somewhat similar material is to be found in abundance in Catalogus Codicum Astrologorum Graecorum, 2. 144–152; 5. 172–179; 8, Part 3, 189–190.

[70]1.12.3.

[71]Scattered bits of weather lore of planets are as follows: Mars is subject to uncertain winds and thunderbolts (Lucan, Pharsalia 10.206). When Saturn is in Capricorn, there are rains and thunderbolts; when it is in Scorpion, there are winds (Servius on Vergil, Georgics 1.336). The transit of Saturn causes rains (Pliny 2.106).

Under the caption Stars Held Sure Index to Weather, The New York World for July 7, 1925 published similar ideas in its magazine section.

[72]See Cook, Zeus 2.557–558. An important and lengthy reference is Catalogus Codicum Astrologorum Graecorum, 4. 83–84. See also 2.161 and 7.214.

[73]E. g. frigida Saturni stella, Vergil, Georgics 1.335 (compare Pliny 18.209); Iovis stella inter Martis ferventissimam et Saturni frigidissimam, Vitruvius 6.1.11; frigida Saturni glacies et zona nivalis, Lucan, Pharsalia 10.205–206; Saturni sidus gelidae ac rigentis naturae, Pliny 2.34; Saturni stella frigida, Censorinus, Fragment 3.3 (ed. Hultsch). In his note on Georgics 1.12 Servius describes Saturn as humoris totius et frigoris deus. Hermippus, De Astrologia Dialogus 13.79–80 (Teubner edition, pages 18–19), says that, since Saturn was a cold star, it had associated with it old age, which was regarded as physically cold and sluggish.

[74]For the literature of the subject see THE CLASSICAL WEEKLY 18.165, Note 176.

[75]Servius and Probus on Vergil, Georgics 1.138. See also Hesiod 615, 618; Scholium on Aratus 254.

[76]Moero, as quoted by Athenaeus 11.491 b.

[77]See Thompson, A Glossary of Greek Birds 132 (Oxford, 1895).

[78]Athenaeus, 11.491 b.

[79]On Iliad 18.486. See too J. Ilberg, s. v. Pleiades, in Roscher, Ausführliches Lexikon der Griechischen und Römischen Mythologie, 3.2551.

[80]Servius on Vergil, Georgics 1.138; Hyginus, Astronomicon 2.21; Scholium on Germanici Caesaris Aratea, page 149 of A. Breysig's edition (Teubner, 1867); Festus 510–511 (Lindsay's edition); Isidore, Origines 3.71.13.

[81]Valerius Flaccus 5.46; Isidore, Origines 3.71.13; Servius on Vergil, Georgics 1.138. Theocritus 13.25–29 tells us that the Argo sailed at the rising of the Pleiades.

[82]De Re Militari 4.39.

[83]Theophrastus, Historia Plantarum 6.5.1; Pliny 18.223. Compare Geoponica 2.14.3.

[84]Hesiod 383–384; Eustathius in Migne, Patrologia Graeca 18.720. See also Scholium on Aratus 11.

[85]Geoponica 10.48.4. [86]Pliny 18.273–274.

sprouting season for olives and for vines[87], conditions were going to be very hard upon them if rain occurred[88]. Their cultivation and likewise their harvest were regulated with reference to the Vergiliae[89], which were regarded as their constellation[90]. Tillage of the vineyards ceased, however, when the 'house-carriers' (snails) climbed up plants in the middle of May to escape the Pleiades[91].

Another industry that started in Italy with the rise of the Vergiliae was cheese-making[92]. Fishermen, too, became busy, for eels were taken in greatest abundance at this time[93], and tunnies could be caught from this time until the setting of Arcturus[94].

Bees, which had ceased their work for the winter with the setting of the Vergiliae, renewed activity after their rising[95]. In Italy, as in Greece[96], the movements of this constellation were the time-table for the activities of bee-culture[97]. Apiarists gathered a yield of honey both at their rising and at their setting[98].

Many tasks were to be performed at the setting of these stars[99]. Fall plowing and sowing were to start at this time[100]. Vergil[101] advised that wheat and spelt be sown at this period; Pliny[102] recommends that, wheat and barley be sown then. Among the leguminous plants which were to be sown before their setting[103], Varro[104] specified beans.

A few duties were scheduled as appropriate after their setting: the pruning of vines[105] and trees[106], and planting (as opposed to sowing)[107]. Varro[108] recommended that grapes be gathered and wine made between the autumnal equinox and the setting of the Pleiades, while vines should be pruned and trees propagated and planted immediately afterward[109]. In short, the six months during which the Vergiliae were visible marked the period in which the productive forces of nature were in operation[110].

The setting of the Pleiades was a common sign of storm[111]. We find applied to them many adjectives meaning 'stormy'[112], 'rain-bearing'[113], 'dripping'[114], 'moist'[115], 'watery'[116], 'fierce'[117], 'cloudy'[118]. They checked navigation after the month of November[119]. There are many references to the disturbances they caused upon the sea[120]. Hesiod[121] thus adjures his brother:

> When the Pleiades plunge into the misty sea to escape Orion's rude strength, then truly gales of all kinds rage. Then keep ships no longer on the sparkling sea, but bethink you to till the land as I bid you.

As might be expected, they hampered military operations. When Hannibal's men arrived at the summit of the Apennines, already worn out by numerous hardships, a snowfall at the setting of the Vergiliae caused great terror[122].

It was believed that[123]

> ...whatever is the condition of the atmosphere when the Pleiad sets, that it continues in general to be till the winter solstice, and, if it does change, the change only takes place after the solstice: while, if it does not change, it continues the same till the spring equinox: the same principle holds good from that time to the rising of the Pleiad, from that again to the summer solstice, from that again to the autumnal equinox, and from that to the setting of the Pleiad.

Wide-awake merchants, especially tailors, took advantage of this (supposed) knowledge. When a cloudy setting proclaimed a rainy winter, they increased the price of goods. When a clear setting signified a bitter winter, the price of other kinds of clothes soared[124].

### ARCTURUS

Arcturus, the brightest star in Bootes, aroused the utmost fear[125]. Its rising was fraught with very special significance for five days both on land and on sea[126]. On setting too, as well as on rising, it caused the worst kind of storms[127]. Its appearance might be attended by hail[128], winds[129], or showers[130]. Rains would not prevail throughout Arcturus, however, if they occurred at the setting of the Dolphin[131]. A lack of rain at the rising of the Dog-Star or of Arcturus meant as a rule that there would be wind or rain toward the equinox[132]. Swallows, too, feared the rising of Arcturus, since they perished if they did not depart in time to anticipate

[87]Pliny 16.104, 18.287.
[88]Pliny 17.11. [89]Pliny 17.130, 188, 18.319. [90]Pliny 17.11.
[91]Hesiod 571–573. Compare Pliny 18.280. [92]Varro 2.11.4.
[93]Pliny 9.74. [94]Pliny 9.53. [95]Pliny 11.13. Compare 11.43.
[96]Aristotle, Historia Animalium 5.22.4.
[97]Pliny 11.43; Columella 9.14.1, 4, 5, 11, 13.
[98]Vergil, Georgics 4.231–235. See T. E. Page's note ad loc. For three periods of taking honey see Varro 3.16.34, and Geoponica 15.5.1.
[99]Pliny 18.320: ...quaeque a Vergiliarum occasu agi debent.
[100]Hesiod 384–385; Aratus 267; Theophrastus, Historia Plantarum 8.1.2; Pliny 18.49, 201, 223, 280. In Hesiod 614–616 the Hyades and Orion are linked with the Pleiades.
[101]Georgics 1.219–222. See also Pliny 18.202; Columella 2.8.1; Eustathius in Migne, Patrologia Graeca 18.720.
[102]18.49. See also 17.131.
[103]Pliny 18.120. See also Theophrastus, De Causis Plantarum 3.23.1.
[104]1.34.2.
[105]Theophrastus, De Causis Plantarum 3.13.2; Geoponica 9.9.5.
[106]Theophrastus, De Causis Plantarum 3.7.10.
[107]*Ibid*, 3.4.1. Another period for this operation was from the spring solstice to Arcturus (*ibid.*). See also Geoponica 10.2.2, 10.85.2, 3.13.2.
[108]1.34.2.
[109]In connection with the relation of the Pleiades to agricultural operations one should consult Sir James G. Frazer, Spirits of the Corn and of the Wild, 1.307–319 (London, 1919).
[110]Pliny 18. 280.
[111]Horace, Carmina 4.14.20–22; Ovid, Ars Amatoria 1.409; Valerius Flaccus 5.415; Hilarius, In Genesin 69 (Corpus Scriptorum Ecclesiasticorum Latinorum 23.233). Contrast Propertius 2.16.51.
[112]Hesiod, as quoted by Athenaeus 11.491 d.
[113]*imbrifera...sub Pleiade*, Lucan, Pharsalia 8.852.
[114]*madida cadente Pliade*, Claudian 8.437–438. Compare Avienus 1805.
[115]*Pleias uda*, Ovid, Fasti 5.664.
[116]*Pliadae aquosae*, Statius, Thebais 4.120.
[117]*aspera Pleias*, Valerius Flaccus 2.405–406.
[118]*nubila Plias*, Statius, Silvae 3.2.76. Compare *Pliada lege poli nimboso moverat astro*, Valerius Flaccus 2.357; *nimbis soluta Plias*, Statius, Silvae 1.6.21–22.
[119]Vegetius, De Re Militari 4.39.
[120]Ovid, Heroides 17.188, Ex Ponto 2.7.58; Valerius Flaccus 2.406, 4.269, 5.305; Manilius 1.371; Seneca, Hercules Furens 10; Claudian 26.209; Claudius Rutilius Numatianus, Itinerarium 1.167.
[121]619–623 (H. G. Evelyn-White's translation). An echo of this passage is to be found in Quintus Smyrnaeus 5.367–369.
[122]Livy 21.35.6; Polybius 3.54.1. See also Bellum Africum 47; Quintus Curtius Rufus 5.6.12.
[123]Theophrastus 7 (Hort's translation). Compare Geoponica 1.5.2.
[124]Pliny 18.225.
[125]*signum...acerrumum*, Plautus, Rudens, Prologue 70. It is called *vehementissium* by Vegetius, De Re Militari 4.39.
[126]Pliny 18.310.
[127]...cuius ortus et occasus tempestates gravissimas facit, Servius on Vergil, Georgics 1.204; Vergil, Georgics 1.67–68; Aratus 744–745; Scholium on Aratus 744; Scholium on Apollonius Rhodius 2.1098; Pliny 18.278; Columella 11.2.21, 43, 58; Ampelius, Liber Memorialis 2; Scholia Basileensia on Germanici Caesaris Aratea, Breysig's edition, page 67 (Berlin, 1867).
[128]Pliny 2.106.
[129]Columella 11.2.21, 63, 65; Claudian 21.123. The setting, too, was attended by wind: Columella 11.2.45, 78.
[130]Pliny 17.230. [131]Pliny 18. 311. [132]Theophrastus 23.

this event. Their departure was, in fact, an indication of the rising of this star[123].

It was especially dangerous to be sailing while Arcturus was rising[124]. Dion's expedition against Dionysius and Syracuse encountered a severe storm during which

a boisterous wind from the north rushed down upon them, raised a great sea, and drove the ships away from Sicily, while flashes of lightning and peals of thunder, now that Arcturus was just rising, conspired to pour down from the heavens a great storm of furious rain[125].

A monument to a victim of the blasts of Boreas begins with the significant sentence: 'Hateful to sailors is a voyage at the time of Arcturus'[126]. It was a rash man who refused to heed Plaustrum and Arcturus and who despised Bootes[127]. Though Arcturus was violent on rising, it was still more violent on setting. In the Prlogue of the Rudens[128] of Plautus Arcturus says:

nam signum Arcturus omnium sum acerrumum:
vehemens sum exoriens, quom occido vehementior.

Many of the spring and fall activitives upon the farm were regulated by Arcturus. Its setting indicated the season for plowing[129], and for sowing vetch, kidney-beans, and lentils[140]. One of the four periods of germination of trees was at this time[141]. Mago advised planting almonds from its setting to the winter solstice[142]. If timber had to be cut a little prematurely, it was best to do so at the setting of this star and before the rising of Fidicula[143].

The period for transplanting thyme from the hotbed to the garden was from the blowing of Favonius to Arcturus[144]. Hemp, however, was sown at its rising[145]. If land was not productive, the best procedure was to turn it over with a shallow furrow just before the appearance of Arcturus[146].

When rosy-fingered Dawn sees Arcturus, then it is the time to harvest grapes[147]. Between this time and the coming of the swallow the vines should be pruned[148].

In Greece, bees sleep from the winter solstice till the rising of Arcturus, from which time till the vernal equinox they are awake and live on the food stored up for this period[149]. Columella[150] says that at the rising of Arcturus bees begin to make honey, and that between the appearance of Canicula and that of Arcturus drones must be kept from attacking workers issuing from the hives. According to Varro[151], there are three periods of taking honey from the bees, one of which is before Arcturus becomes entirely visible. The least desirable honey, a wild variety, was produced for the most part at the rising of Arcturus[152].

The season for mating sheep extended from the setting of Arcturus to that of Aquila[153]; lambs conceived later were puny and weak[154]. The shepherds who pastured their flocks upon Cithaeron regarded the appearance of Arcturus as a signal that their six months' sojourn was at an end and that they should drive their flocks to their winter folds[155–156].

*(To be concluded)*

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[123]Pliny 18. 311. Contrast Columella 9.14.17–18.
[124]Aratus 744–745; Ovid, Ex Ponto 2.7.57; Manilius 5.358; Solinus 11.35.
[125]Plutarch, Dion 25.3 (Perrin's translation).
[126]Anthologia Graeca 7.495.
[127]Claudian 15.501–504.
[128]69–70. Compare Horace, Carmina 3.1.27–28 saevus Arcturi cadentis impetus.
[129]Pliny 18.137. Compare 17.134.
[140]Vergil, Georgics 1.227–229; Pliny 18.202 (compare 120). In these passages Vergil and Pliny use the name of the constellation to which Arcturus belongs, Bootes.
[141]Pliny 16.99. [142]Pliny 17.131. [143]Pliny 16.188.
[144]Varro 1.35.2. Compare Geoponica 9.11.6.
[145]Columella 2.10.21; Geoponica 2.40.2.
[146]Vergil, Georgics 1.67.
[147]Hesiod 610–611. [148]Hesiod 564–570. [149]Pliny 11.43.
[150]9.14.10. [151]3.16.34. [152]Pliny 11.41.
[153]Pliny 8.187; Varro 2.1.18. [154]Varro 2.2.13.
[155]Sophocles, Oedipus Tyrannus 1133–1139. See Jebb's note on pages 305–308 of his edition of this play.
[156]Theophrastus, too, makes references to this star, e. g. Historia Plantarum 1. 9.7, 1.14.1, 3.5.4, 9.8.2, De Causis Plantarum 1.6.3, 1.13.3, 5, 5.10.1, 6.8.1, 5.

## REVIEWS

Horace at Tibur and the Sabine Farm. By G. H. Hallam. Harrow, England: Harrow School Bookshop (1923). Pp. 24.

The combination within so few pages of the entertaining and the erudite which meets us in Mr. G. H. Hallam's book, Horace at Tibur and the Sabine Farm, might be a bit puzzling were it not explained in the Preface (4–5). There we read that the material here presented was first arranged for a "talk" to accompany a set of lantern-slides sponsored by the Roman Society and the Hellenic Society (of Great Britain) in the hope of attracting boys and girls of Secondary Schools to whom Latin and Greek had hitherto been a sealed book. "It was laid down that the pictures should be beautiful and attractive in themselves, and that the 'talks', though composed by competent scholars, should not be technical or abstruse". Hence we find a little outline of Horace's life, facts familiar to anyone who has read anything of him or about him, a pleasant poem or two relating to Horace, some discussion of Horace's art, a number of excellent illustrations from photographs and drawings, two clear little maps (of the Anio Valley, and of Tibur), and some archeological description and exposition. It is in this last mentioned item especially that we find matter which seems to transgress a little the bounds laid down in the Preface prohibiting the technical; but perhaps this is due to the fact that the original "talk" was modified to be given without slides before the Anglo-American Archaeological Society of Rome, in the Villa of Horace, at Tivoli, in April, 1923, and it is in this form that it is printed.

Thus printed it is more likely to serve a secondary purpose mentioned in the Preface, that of "guide to some who may visit Tivoli and the Valley of the Digentia". I should advise any such visitor, unless he has all that is known of the monuments and the topography of this district at his fingers' ends, or is accompanied by a really scholarly and specially equipped human guide, to have in his pocket a copy of this slender volume. The maps alone are worth the trouble of carrying the book.

The portion dealing with The Sabine Farm (8–15),

aside from the map, is rather scant, and not particularly illuminating, but still it would make a substantial peg on which to hang the enthusiastic explanations of the local *cicerone*, especially if the visitor is not sure of understanding completely the Italian tongue, even when it is spoken slowly by a man used to the needs of the foreigner.

In the chapter on Tibur (16–23) Mr. Hallam is on his own ground, for San Antonio, believed to be on the site of Horace's villa, was for fifty years the home of his wife's family, and at times his own abiding-place. Naturally, then, we have a fuller description and a warmth of personal interest for which he need not have apologized, since it adds a charm to his pages that will attract many who have never seen the place, while those who have seen it can hardly read without a pang of sweet nostalgia of the "semi-tropical hill-side" with its blossom and fruit, violets, roses, blue irises, "sword-blades of Saint Anthony", Madonna lilies, strawberries, peaches, and figs, the *nespolo* with its deliciously refreshing acid, and in autumn the pomegranate, prickly pear, and pizzatello grape. Note this passage (20):

> ...Side by side with these are olive trees, dusted over in springtime with their soft, yellowish blossom... and date palms, and the bright green of lemon trees..., while the flowering aloe rears its mighty stems, topped by great yellow tassels, twenty feet or more into the air. In the warm spring evenings the full song of the nightingales comes up from the 'bosky glen', and innumerable fireflies twinkle everywhere like tiny stars. What wonder if Horace wished to spend his old age in such a spot....

For his account of the archeological aspects of Tivoli Mr. Hallam has the support of Dr. Thomas Ashby, who, as Director of the British School in Rome, and as friend of Mr. Searle, Mr. Hallam's father-in-law, "has known the Villa intimately for many years", and can speak as one of the prescribed "competent scholars" on that subject.

It is needless, probably, to remark that within the compass of so small a book there is no room for discussion of points upon which scholars are not fully in agreement, and so an occasional statement as of fact where some might make a reservation is permissible.

Teachers of the Classics may be glad to know that the distribution of the slides to be used with the "talk" and of fourteen similar sets on other classical subjects (of which a list is given in a footnote on page 4) is controlled by the office of the combined Societies at 19 Bloomsbury Square, London, "and members of either society may use them or allow them to be used by others on payment of a small fee". If the illustrations of this book prove the standard of excellence of the slides, the slides are worth looking into.

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Helps to the Study of Ancient History. Based Upon Webster's Ancient History. By Franklin A. Kuller. Boston and New York: D. C. Heath and Company. (1924). Pp. iv + 108.

Mr. Kuller's little manual, Helps to the Study of Ancient History, is designed, according to its introductory statement (1), to aid pupils in the daily process of study, to make sure that there is a definite amount of work on each chapter that all have prepared, to prevent failures wherever possible, to provide extra material as a means of enriching the course, to make the study interesting for those who must take the subject as well as for those who have elected it, and to put a premium on ability (memory, reasoning, judgment, etc.) when added to the desire to do real work.

The title is slightly misleading. The manual is based on Professor Hutton Webster's excellent text-book, which it follows so rigidly as to exclude the possibility of using it with any other text-book. Its prefatory remarks (1–7) will be found practical and helpful to the young teacher, inasmuch as they give some hints, based obviously upon experience, about the method of handling the work in the ninth and the tenth grades. For the rest, however, the manual is merely a teaching syllabus of the text-book, and so might more appropriately be entitled Helps to the Study of Webster's Ancient History.

It would be unfair to criticize,for errors of proportion, a book of this type or even the larger book by Webster. The conception of Oriental history so long imposed upon students by the Old Testament has by no means been abandoned under the archaeological onslaught of the present generation. Our students still spend as much time upon the Hebrews and the Phoenicians as upon the Egyptians, or upon the Babylonians and the Assyrians together (in Webster e. g. Egypt, Babylonia, and Syria receive three sections apiece; Assyria receives one). The Hittites have just begun to find themselves tucked away in footnotes, and the Cretans are still in the nondescript category "Pre-Greeks". It may be remarked, incidentally, that this viewpoint is the occasion of an error in a map on page 25 of Webster's book, where the Cretans are indicated as Indo-Europeans.

A few miscellaneous remarks may be made here. The reviewer, whose experience with pupils in the grades is limited to the reading of their entrance examination papers, is not a little alarmed at some of the facts which these pupils are expected to recall. Menhir, dolmen, Merodach, Arallu, hypostyle, abacus, Nearchus, ambitio, feriae, Lemuria, taurobolium, strigil, spina, intaglio, thermae—are these really learned by the pupil? War is probably an attractive subject to young people, and there is therefore the excuse of interest to justify its inclusion in books of the sort under discussion. One may hope, however, for the day to come when campaigns and generals shall be relegated to the less conspicuous background and the student shall be freed from the necessity of describing (56) "the following battles fully: Leuctra, Himera, Mantinea, Marathon, Salamis, Plataea, Issus, Mycale, Arbela, Thermopylae, Granicus, Artemisium, Aegospotami, Arginusae, Tyre", or of answering this question (69): "Was Hannibal the greatest general in history? (References, p. 356.)"

But these objections cannot in justice be urged against Mr. Kuller's book. In its limited field, it will be found useful. It is attractively and accurately printed.

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